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EXAMINER

PARIKH, HARSHAD R

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/507,154	<b>Applicant(s)</b> GOLDSCHLAGER, LESLIE M.	
	<b>Examiner</b> HARSHAD PARIKH	<b>Art Unit</b> 3687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) 1 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/2/2005 and 3/21/2005</u> .                                  | 6) <input type="checkbox"/> Other: ____.                          |

### **DETAILED ACTION**

Priority claim to PCT/AU03/00355 dated March 23, 2003 (international filing date) is acknowledged.

Priority claim to US provisional application 60367207 dated March 26, 2002 is acknowledged.

### ***Claim Objections***

Claims 1 and 12 are objected to because of the following informalities:

It appears that "batch or orders" was intended to be -- "batch of orders"--, which change will be assumed for purposes of further consideration of the claim as to the merits, herein below. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112, Second Paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The primary purpose of this requirement of definiteness of claim language is to ensure that the scope of the claims is clear so the public is informed of the boundaries of what constitutes infringement of the patent. A secondary purpose is to provide a clear measure of what applicants regard as the invention so that it can be determined

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whether the claimed invention meets all the criteria for patentability and whether the specification meets the criteria of 35 U.S.C. 112, first paragraph with respect to the claimed invention. In the instant invention, claim 10 recites the broad and unclear recitation “optimizing the size of said groups”.

Under the broadest reasonable interpretation consistent with the specification, Examiner is defining this to be “optimization based on minimum number of ejections”.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The primary purpose of this requirement of definiteness of claim language is to ensure that the scope of the claims is clear so the public is informed of the boundaries of what constitutes infringement of the patent. A secondary purpose is to provide a clear measure of what applicants regard as the invention so that it can be determined whether the claimed invention meets all the criteria for patentability and whether the specification meets the criteria of 35 U.S.C. 112, first paragraph with respect to the claimed invention. In the instant invention, claim 12 recites the broad and unclear recitation “most closely matches”.

Under the broadest reasonable interpretation consistent with the specification, Examiner is defining this to be “the limit of number of items in a group and a type of the item based on item details”.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-12 and 16-21 are rejected under 35 U.S.C. 101 based on Supreme Court precedent, and recent Federal Circuit decisions, the Office's guidance to examiners is that a § 101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780,787-88 (1876).

An example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps. Thus, to qualify as a § 101 statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

Here, applicant's method steps, neither transform underlying subject matter or are tied to another statutory class can be preformed without the use of a particular apparatus. Thus, claims 1-12 and 16-21 are non-statutory since the steps are not tied to specific apparatus.

Claims 31-33 are directed to a "computer readable medium" and therefore not considered a process for the purposes of § 101. However, these claims recite actions or steps as part of the method system (claims 1, 12 and 16). A single claim that claims both an computer readable medium and the method steps of using the apparatus is indefinite. *IPXL Holdings v. Amazon.com, Inc.*, 430 F.2d 1377, 1384, 77 USPQ2d 1140, 1145 (Fed. Cir.2005). These claims do not properly apprise the public as to what would constitute infringement (i.e., creation of the claimed system or the act of using it) and accordingly are rejected as vague and indefinite under § 112, second paragraph.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6, 11, 13-16, 22, 23, 27, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godenzi (AU A 48252/96 : submitted document in IDS), hereinafter referred to as Godenzi, in view of Burke (US 5,848,399), hereinafter referred to as Burke.

This refers to independent claims 1, 13, 16 and 22.

Referring to claim 1, Godenzi discloses a method of storing and retrieving items, (See Godenzi: Abstract (collection of goods)) comprising:

grouping said items into one or more groups of said items; (See Godenzi: Abstract (The goods such as food items are each stored at a discrete location within a storage area such as at. particular locations on shelves of a supermarket), Page 5:

Lines 15-17 (the names of the **goods**, cheese / kraft/ **250g / sliced**))

recording the content of each of said groups; (See Godenzi: Abstract (**goods identification** and location information), Page 5: Lines 15-17 (the names of the **goods**, cheese/kraft/**250g/sliced**))

comparing a batch of one or more orders for said items with the recorded content of said groups in order to locate a matching group from said groups that matches said batch or orders; (See Godenzi: Page 5: Line 1 (shopping list)) with the recorded content of said groups in order to locate a matching group from said groups that matches said

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batch or orders; (See Godenzi: Abstract (find matches and stores particulars of the matches)) and

retrieving said matching group in order to fill said batch of orders. (See Godenzi:

Page 6: Lines 2-4 (goods can be collected sequentially as a collector passes sequentially throughout the supermarket.))

Referring to claim 13, Godenzi discloses an apparatus for storing and retrieving items (See Godenzi: Abstract (collection of goods)), comprising:

data storage means for recording the location and content of each of a plurality of groups of said items; Abstract (The goods such as food items are each stored at a discrete location within a storage area such as at. particular locations on shelves of a supermarket), Page 5: Lines 15-17 (the names of the **goods**, cheese / kraft / **250g / sliced**)) (See Godenzi: Fig 1: Items 9 and 11) (See Godenzi: Abstract (storing **goods identification** and **location** information of all possible goods)

data processing means for receiving information corresponding to a plurality of orders and for grouping at least some of said orders into a batch of orders and comparing said batch of orders with said contents of said groups of items in order to identify and locate a matching group; (See Godenzi: Abstract (**goods identification** and location information), Page 5: Lines 15-17 (the names of the **goods**, cheese / kraft / **250g / sliced**)) (See Godenzi: Fig 1: Items 1 (CPU) and 15 (Floppy disk)) and

communication means for communicating the identity of said matching group. (See Godenzi: Fig 1: Items 1 (CPU) and Item 13 (matches))



Referring to claim 16, Godenzi discloses a method of storing and retrieving items (See Godenzi: Abstract (collection of goods)), comprising:

storing said items into one or more groups of said items; (See Godenzi: Abstract (The goods such as food items are each stored at a discrete location within a storage area such as at. particular locations on shelves of a supermarket), Page 5: Lines 15-17 (the names of the **goods**, cheese / kraft / **250g / sliced**))

recording the location of each of said items according to at least group; (See Godenzi: Abstract (storing **goods identification** and **location** information of all possible goods), Fig 1: Memory area 9)

comparing an order or orders for a plurality of requested items with said recorded locations; (See Godenzi: Page 5: Line 1 (shopping list)) with the recorded content of said groups in order to locate a matching group from said groups that matches said batch or orders; (See Godenzi: Abstract (find matches and stores particulars of the matches)) and

locating as many of said requested items as possible in a first of said groups and then, if any requested items are not located in said first of said groups, locating as many previously remaining requested items as possible in each of subsequent ones of said groups; (See Godenzi: Abstract (The system then requires comparing said particulars in the two memory areas to find matches and stores particulars of the matches))

whereby once all of said requested items have been located, requested items can be retrieved to fill said order or orders. (See Godenzi: Page 6: Lines 2-4 (goods can

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be collected sequentially as a collector passes sequentially throughout the supermarket.))

The Examiner notes, “if any requested items are not located in said first of said groups” is embedded within a “if” statement which is a conditional limitation and is given little patentable weight. Methods are composed of actions, when you perform the actions of a method and do not select one of the alternatives or “if” steps, you are not performing any action under those alternatives. Accordingly, and as in the method itself, once a positively recited step is satisfied, the method as a whole is satisfied - regardless of whether or not other steps are conditionally invocable under certain other hypothetical scenarios. **Many claims have the similar embedded if statement in the text of the claim. The above notes are applicable at all such situations.**

Referring to claim 22, Godenzi discloses an apparatus for storing and retrieving items, comprising:

**one or more storages, each for storing a respective group of said items;**

a data storage for recording the location of each of said items according to at least group; (See Godenzi: Abstract (storing **goods identification** and **location** information of all possible goods), Fig 1: Memory area 9)

a data processor for comparing an order or orders for a plurality of requested items with said recorded locations, and for locating as many of said requested items as possible in a first of said groups and then, if any requested items are not located in said

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first of said groups, locating as many previously remaining requested items as possible in each of subsequent ones of said groups; (See Godenzi: Abstract (The system then requires comparing said particulars in the two memory areas to find matches and stores particulars of the matches), Fig 1: Item 1 (CPU))

whereby said apparatus is operable to locate all of said requested items for subsequent retrieval. (See Godenzi: Page 6: Lines 2-4 (goods can be collected sequentially as a collector passes sequentially throughout the supermarket.))

Godenzi does not explicitly disclose the limitation of items being grouped into one or more groups.

However, referring to claim 1, Burke teaches a method of storing and retrieving items, comprising:

grouping said items into one or more groups of said items; (See Burke: Fig 7)

However, referring to claim 13, Burke teaches an apparatus for storing and retrieving items, comprising:

data storage means for recording the location and content of each of a plurality of groups of said items. (See Burke: Fig 7)

However, referring to claim 16, Burke teaches a method of storing and retrieving items, comprising:

storing said items into one or more groups of said items. (See Burke: Fig 7)

However, referring to claim 22, Burke teaches an apparatus for storing and retrieving items, comprising:

one or more storages, each for storing a respective group of said items; (See Burke: Fig 7 and 8)

Therefore, it would have been obvious to one of ordinary skills in the art, at the time of invention, to have modified the invention of Godenzi so as to implement grouping of an individually sellable item into a group. It is a common procedure to group individual items as much as possible for efficiency and since so doing could be performed readily and easily by any person of ordinary skill in the art, with neither undue experimentation, nor risk of unexpected results.

This refers to dependent claims 4-6, 11, 14-15, 23, 27, 31 and 33.

Godenzi discloses and Burke teaches all limitations of independent claims 1, 13, 16 and 22.

Additionally, referring to claim 4, Godenzi discloses a method as claimed in claim 1, wherein said batch of orders comprises a consecutively received plurality of orders.

(See Godenzi: Page 5: Line 1 (shopping list))

(See Godenzi: Page 5: Line 7 (supermarket may provide, free to **customers**))

(See Godenzi : Page 5: Line 21-24 (Thus, a variety of goods to be purchased can be entered into the PC and stored in a memory area 9 in the memory 7))

(See Godenzi: Page 7: Line 10-20: (If a modem is used in the system then it is possible that the shopping list can be relayed via the modem to the store and held at the store. In this way, a person can collect their shopping list at the store by obtaining a printout of their shopping list at the time when they enter the store. Alternatively, the store may arrange for personnel to actually collect the goods in the shopping list and have them awaiting collection at the store or have them home delivered.))

Additionally, referring to claim 5, Godenzi discloses a method as claimed in claim 1, including locating each of said groups of items in or on a container so that each of said groups can readily be transported until a suitable batch of orders is received and retrieved when a suitable batch of orders has been received. (See Godenzi: Page 5: Lines 30-34: (When all the goods to be purchased have been entered, the PC can be

activated via the software to compare the listing of goods in memory area 9 with the listing of the goods in the further memory area 11 to define matches))

Additionally, referring to claim 6, Godenzi discloses a method as claimed in claim 1, including recording the order of said items in each of said groups, (See Godenzi: Page 5: Lines 30-34: (When all the goods to be purchased have been entered, the PC can be activated via the software)) and matching said batch of orders with a matching group on the basis of both the content and sequence of items in said order and in said matching group of said items. (See Godenzi: Page 5: Lines 30-34: (When all the goods to be purchased have been entered, the PC can be activated via the software)) to compare the listing of goods in memory area 9 with the listing of the goods in the further memory area 11 to define matches))

Additionally, referring to claim 11, Godenzi discloses a method as claimed in claim 1, including storing in a computer database data indicative of the incoming items and the location in which each of said incoming item is stored. (See Godenzi: Abstract (storing **goods identification** and **location** information of all possible goods), Fig 1: Memory area 9)

Additionally, referring to claim 14, Godenzi discloses an apparatus as claimed in claim 13, including retrieval means for receiving the identity of said matching group from said communication means and retrieving said matching group. (See Godenzi: Page 6:

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Lines 4-6 (so the goods can be collected sequentially throughout the supermarket. The computer can then either display the shopping list on the monitor 5 or alternatively print the shopping list), Fig 1: Items 1, 13, 5 and 17)

Additionally, referring to claim 15, Godenzi discloses an apparatus as claimed in claim 14, wherein said retrieval means is also a storage means, for storing each of said groups of items as directed by said data processing means. (See Godenzi: Fig 1: Items 13) (Examiner's note: matching groups are stored with the sequence)

Additionally, referring to claim 23, Godenzi discloses an apparatus as claimed in claim 22, including a computer having said data storage and said data processor. (See Godenzi: Fig 1 (entire system 19 with CPU 1 and memory 7))

Additionally, referring to claim 27, Godenzi discloses an apparatus as claimed in claim 22, wherein said data processor is operable to check groups sequentially for previously unlocated items. (See Godenzi: Abstract (The system then requires comparing said particulars in the two memory areas to find matches and stores particulars of the matches))

Additionally, referring to claim 31, Godenzi discloses a computer readable medium with computer program portions for controlling a computer to perform the method defined claim 1. (See Godenzi: Fig 1: Item 15 (floppy disk))

Additionally, referring to claim 33, Godenzi discloses a computer readable medium with computer program portions for controlling a computer to perform the method defined in claim 16. (See Godenzi: Fig 1: Item 15 (floppy disk))



This refers to claims 2 and 3.

Additionally, referring to claim 2, Burke teaches a method as claimed in claim 1, wherein said groups of items constitute a plurality of sets of groups, each set of groups comprising one or more groups of equal numbers of items. (See Burke: Fig 7, Item 200 (a group of two boxes of crunch flakes))

Additionally, referring to claim 3, Burke teaches a method as claimed in claim 2, wherein each of said groups has the same number of items. (See Burke: Fig 7, Item 200 (a group of two boxes of crunch flakes)) (Examiner's notes: A typical supermarket arrangement of goods)

Claims 7-8 , 10, 12, 17-21,24, 26, 28-30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godenzi in view of Burke and further in view of Knapp (US 4,518,302), hereinafter referred to as Knapp.

This refers to claims 7-8, 10, 17-21, 24, 26 and 28-30.

Godenzi discloses and Burke teaches all limitations of claims 1, 16 and 22.

Godenzi discusses an invention that stores the inventory, its location of storage and details of all the items in a supermarket. It receives a batch of order (customer shopping list) and then prepares matches between items to be purchased and its availability with location and number so that all items can be collected efficiently.

Burke teaches an invention that discusses a 3D display of all current items in a warehouse by exact location showing the items, the collection of similar items and a set of different items.

Neither Godenzi nor Burke explicitly discusses the situation of a partial order fulfillment and associated alternatives.

However, referring to claim 7, Knapp teaches a method as claimed in claim 1, wherein, if none of the existing groups of items matches a batch of orders, the method includes reducing the size of said batch of orders until said reduced batch matches a portion of at least one of said groups of items, and deeming said portion of said group of

items to constitute said matching group. (See Knapp: Col 4 Lines 55-58 (If any item of the order has not been released, then the container code number receives an F-index mark which is retained until completion of the entire order))

(See Knapp: Col 4 Lines 62-65 (whether the missing item is in stock at the main storage complex whose inventory is stored in the computer memory))

(See Knapp: Col 5 Lines 55-58 (cannot be filled manually since the missing article is no longer in stock in the entire warehouse inventory. The computer then indicates the deficiency report and, if necessary, a re-supply date))

The Examiner notes, “if none of the existing groups of items matches a batch of orders” is embedded within a “if” statement which is a conditional limitation and is given little patentable weight. Methods are composed of actions, when you perform the actions of a method and do not select one of the alternatives or “if” steps, you are not performing any action under those alternatives. Accordingly, and as in the method itself, once a positively recited step is satisfied, the method as a whole is satisfied - regardless of whether or not other steps are conditionally invocable under certain other hypothetical scenarios.

However, referring to claim 8, Knapp teaches a method as claimed in claim 7, including subsequently grouping the remaining items of said group with other items to form new groups of said items. (See Knapp: Col 5 Line 56 (entire warehouse inventory), Line 66 (inventory control))

However, referring to claim 10, Knapp teaches a method as claimed in claim 1, including optimizing the size of said groups. (See Knapp: Col 6 Line 29-36 (if the article is in particularly high demand, several magazines in a single block 1 can be filled with that particular item. The release of the items takes place in an optimal fashion if the ejector of the first magazine ejects one item, while the ejector of a second magazine ejects two items, the ejector of a third magazine ejects 4 items, progressing in this manner by factors of 2)

However, referring to claim 17, Knapp teaches a method as claimed in claim 16, including retrieving said requested items and subsequently treating said retrieved items as no longer stored in any of said groups. (See Knapp: Col 5 Line 56 (entire warehouse inventory), Line 66 (inventory control))

However, referring to claim 18, Knapp teaches a method as claimed in claim 16, including designating the group with the greatest number of the requested items as the first group. (See Knapp: Col 6 Line 29-36 (if the article is in particularly high demand, several magazines in a single block 1 can be filled with that particular item. The release of the items takes place in an optimal fashion if the ejector of the first magazine ejects one item, while the ejector of a second magazine ejects two items, the ejector of a third magazine ejects 4 items, progressing in this manner by factors of 2)

Additionally, referring to claim 19, Godenzi discloses and Knapp teaches a method as claimed in claim 16, including checking said groups sequentially for previously unlocated items (See Godenzi: Abstract (The system then requires comparing said particulars in the two memory areas to find matches and stores particulars of the matches)), or in an order that maximizes the number of items located in each successive group. (See Knapp: Col 6 Line 29-36 (if the article is in particularly high demand, several magazines in a single block 1 can be filled with that particular item. The release of the items takes place in an optimal fashion if the ejector of the first magazine ejects one item, while the ejector of a second magazine ejects two items, the ejector of a third magazine ejects 4 items, progressing in this manner by factors of 2)

Additionally, referring to claim 20, Godenzi discloses and Knapp teaches a method as claimed in claim 16, including determining for a number of possible assignments of said first group and order of subsequent groups the total number of groups required to locate all of said requested items, and then choosing the assignment of first group and order of subsequent group that either minimizes the total number of groups from which the requested items are retrieved (See Knapp: Col 6 Line 29-36 (if the article is in particularly high demand, several magazines in a single block 1 can be filled with that particular item. The release of the items takes place in an optimal fashion if the ejector of the first magazine ejects one item, while the ejector of a second magazine ejects two items, the ejector of a third magazine ejects 4 items, progressing in this manner by factors of 2) **or** minimizes the distance required to be traveled between

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groups to retrieve said requested items. (See Godenzi: Abstract (This permits the goods to be collected in a sequential order as a collector passes sequentially through the storage area))

Additionally, referring to claim 21, Knapp teaches a method as claimed in claim 21, wherein said number of possible assignments of said first group and order of subsequent groups constitutes all possible assignments of said first group and order of subsequent groups. (See Knapp: Col 6 Line 29-36 (if the article is in particularly high demand, several magazines in a single block 1 can be filled with that particular item. The release of the items takes place in an optimal fashion if the ejector of the first magazine ejects one item, while the ejector of a second magazine ejects two items, the ejector of a third magazine ejects 4 items, progressing in this manner by factors of 2)

Additionally, referring to claim 24, Knapp teaches an apparatus as claimed in claim 22, wherein each of said storages includes a signal means to identify to a user the location of a located item, or an ejector for ejecting a requested item. (See Knapp: Abstract (The merchandise pieces making up a single order, which are then **ejected** simultaneously at **each block** once the **transport container** has arrived at the preceding block, are collected and then simultaneously loaded into the transport container when the latter arrives **at the proper block**. After loading, the transport container is allowed to continue))

Additionally, referring to claim 26, Knapp teaches an apparatus as claimed in claim 22, wherein said apparatus is operable to send a data signal to an automated item retriever indicative of the location of a respective requested item, so that said requested items can be retrieved automatically. (See Knapp: Abstract (automatic withdrawal , The merchandise pieces making up a single order, which are then **ejected** simultaneously at **each block** once the **transport container** has arrived at the preceding block, are collected and then simultaneously loaded into the transport container when the latter arrives **at the proper block**. After loading, the transport container is allowed to continue))

Additionally, referring to claim 28, Knapp teaches an apparatus as claimed in claim 22, wherein said data processor is operable to check groups in an order that maximizes the number of items located in each successive group. (See Knapp: Col 6 Line 29-36 (if the article is in particularly high demand, several magazines in a single block 1 can be filled with that particular item. The release of the items takes place in an optimal fashion if the ejector of the first magazine ejects one item, while the ejector of a second magazine ejects two items, the ejector of a third magazine ejects 4 items, progressing in this manner by factors of 2)

Additionally, referring to claim 29, Godenzi discloses and Knapp teaches an apparatus as claimed in claim 22, wherein said data processor is operable to determine a number of possible assignments of said first group and order of subsequent groups,

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and to choose the assignation of first group and order of subsequent group that either minimizes the total number of groups from which the requested items are retrieved (See Knapp: Col 6 Line 29-36 (if the article is in particularly high demand, several magazines in a single block 1 can be filled with that particular item. The release of the items takes place in an optimal fashion if the ejector of the first magazine ejects one item, while the ejector of a second magazine ejects two items, the ejector of a third magazine ejects 4 items, progressing in this manner by factors of 2) **or** minimizes the distance to be traveled between groups to retrieve said requested items. (See Godenzi: Abstract (This permits the goods to be collected in a sequential order as a collector passes sequentially through the storage area))

Additionally, referring to claim 30, Knapp teaches an apparatus as claimed in claim 29, wherein said number of possible assignations of said first group and order of subsequent groups constitutes all possible assignations of said first group and order of subsequent groups. (See Knapp: Col 6 Line 29-36 (if the article is in particularly high demand, several magazines in a single block 1 can be filled with that particular item. The release of the items takes place in an optimal fashion if the ejector of the first magazine ejects one item, while the ejector of a second magazine ejects two items, the ejector of a third magazine ejects 4 items, progressing in this manner by factors of 2)

Therefore, it would have been obvious to one of ordinary skills in the art, at the time of invention, to have modified the invention of Godenzi and Burke so as to



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implement a concept of filling a partial order and rearrange the inventory of items by proper number of items in the groups and number of groups. The invention can take care of the setting the groups based on the demand pattern and the number of items sold at a time. A partial order is always better than no order at all with other alternatives to satisfy the remaining order. Having a minimum number of iterations or steps to retrieve the items to fill up the order is important and is widely used such as retail warehouse shopping (Costco). Filling partial order, providing recommendations for the left over order and adjusting inventory has always been the business process and since so doing could be performed readily and easily by any person of ordinary skill in the art, with neither undue experimentation, nor risk of unexpected results.

This refers to claims 12 and 32.

Referring to claim 12, Godenzi discloses a method of storing and retrieving items, (See Godenzi: Abstract (collection of goods)) comprising:

grouping said items into one or more groups of said items; (See Godenzi: Abstract (The goods such as food items are each stored at a discrete location within a storage area such as at. particular locations on shelves of a supermarket), Page 5: Lines 15-17 (the names of the **goods**, cheese/kraft/**250g/sliced**))

recording the content of each of said groups; (See Godenzi: Abstract (**goods identification** and location information), Page 5: Lines 15-17 (the names of the **goods**, cheese/kraft/**250g/sliced**))

comparing a batch of orders for said items with the recorded content of said groups in order to locate a matching group from said groups that most closely matches said batch or orders; (See Godenzi: Page 5: Line 1 (shopping list)) with the recorded content of said groups in order to locate a matching group from said groups that matches said batch or orders; (See Godenzi: Abstract (find matches and stores particulars of the matches))

retrieving said matching group; (See Godenzi: Page 6: Lines 2-4 (goods can be collected sequentially as a collector passes sequentially throughout the supermarket.))  
and

Godenzi does not explicitly disclose the limitation of items being grouped into one or more groups. Godenzi does not explicitly disclose the concept of filling the order as close as possible.

However, referring to claim 12, Burke teaches a method of storing and retrieving items, comprising:

grouping said items into one or more groups of said items; (See Burke: Fig 7)

Therefore, it would have been obvious to one of ordinary skills in the art, at the time of invention, to have modified the invention of Godenzi so as to implement grouping of an individually sellable item into a group. It is a common procedure to group individual items as much as possible for efficiency and since so doing could be performed readily and easily by any person of ordinary skill in the art, with neither undue experimentation, nor risk of unexpected results.

Godenzi discusses an invention that stores the inventory, its location of storage and details of all the items in a supermarket. It receives a batch of order (customer shopping list) and then prepares matches between items to be purchased and its availability with location and number so that all items can be collected efficiently.

Burke teaches an invention that discusses a 3D display of all current items in a warehouse by exact location showing the items, the collection of similar items and a set of different items.

Neither Godenzi nor Burke explicitly discusses the situation of a partial order fulfillment and associated alternatives.

However referring to claim 12, Knapp teaches a method of storing and retrieving items, comprising:

comparing a batch of orders for said items with the recorded content of said groups in order to locate a matching group from said groups that most closely matches said batch or orders; (See Knapp: Col 4 Lines 55-58 (If any item of the order has not been released, then the container code number receives an F-index mark which is retained until completion of the entire order))

(See Knapp: Col 4 Lines 62-65 (whether the missing item is in stock at the main storage complex whose inventory is stored in the computer memory))

(See Knapp: Col 5 Lines 55-58 (cannot be filled manually since the missing article is no longer in stock in the entire warehouse inventory. The computer then indicates the deficiency report and, if necessary, a re-supply date)) and

modifying said matching group if necessary to exactly match said batch of orders; (See Knapp: Col 5 Lines 55-58 (cannot be filled manually since the missing article is no longer in stock in the entire warehouse inventory. The computer then indicates the deficiency report and, if necessary, a re-supply date))

whereby said batch of orders can be filled. (See Knapp: Col 5 Lines 58-62 (The container can be given to the delivery staff with an indication that the order is

incomplete whereupon the order is filled to the extent possible and the container then again directed back to the conveyor cycle))

The Examiner notes, “modifying said matching group if necessary to exactly match” is embedded within a “if” statement which is a conditional limitation and is given little patentable weight. Methods are composed of actions, when you perform the actions of a method and do not select one of the alternatives or “if” steps, you are not performing any action under those alternatives. Accordingly, and as in the method itself, once a positively recited step is satisfied, the method as a whole is satisfied - regardless of whether or not other steps are conditionally invocable under certain other hypothetical scenarios.

Therefore, it would have been obvious to one of ordinary skills in the art, at the time of invention, to have modified the invention of Godenzi and Burke so as to implement a concept of filling a partial but to the extent possible order and rearrange the inventory of items by proper number of items in the groups and number of groups. The invention can take care of the setting the groups based on the demand pattern and the number of items sold at a time. A partial order is always better than no order at all with other alternatives to satisfy the remaining order. Having a minimum number of iterations or steps to retrieve the items to fill up the order is important and is widely used such as retail warehouse shopping (Costco). Filling partial order, providing recommendations for the left over order and adjusting inventory has always been the business process and

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since so doing could be performed readily and easily by any person of ordinary skill in the art, with neither undue experimentation, nor risk of unexpected results.

Additionally, referring to claim 32, Godenzi discloses a computer readable medium with computer program portions for controlling a computer to perform the method defined in claim 12. (See Godenzi: Fig 1: Item 15 (floppy disk))

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Godenzi in view of Burke and further in view of Joseph (US 5,878,401), hereinafter referred to as Joseph.

This refers to claim 9.

Godenzi discloses and Burke teaches all limitations of claim 1.

Godenzi discusses an invention that stores the inventory, its location of storage and details of all the items in a supermarket. It receives a batch of order (customer shopping list) and then prepares matches between items to be purchased and its availability with location and number so that all items can be collected efficiently.

Burke teaches an invention that discusses a 3D display of all current items in a warehouse by exact location showing the items, the collection of similar items and a set of different items.

Neither Godenzi nor Burke explicitly discusses the situation of a partial order fulfillment and associated alternatives.

However, referring to claim 9, Knapp teaches a method as claimed in claim 1, wherein, if none of the existing groups of items matches a batch of orders, the method includes replacing at least one of said orders with another order from outside said batch of orders to form a modified batch of orders, and then matching said modified batch of orders with a matching group on the basis of both the content and sequence of items in

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said order and in said matching group of said items. (See Joseph: Abstract (If the item is unavailable, the computer determines alternative items that are available for sale.

These available alternative items are interactively displayed for the customer))

The Examiner notes, “if none of the existing groups of items matches a batch of orders” is embedded within a “if” statement which is a conditional limitation and is given little patentable weight. Methods are composed of actions, when you perform the actions of a method and do not select one of the alternatives or “if” steps, you are not performing any action under those alternatives. Accordingly, and as in the method itself, once a positively recited step is satisfied, the method as a whole is satisfied - regardless of whether or not other steps are conditionally invocable under certain other hypothetical scenarios.

Therefore, it would have been obvious to one of ordinary skills in the art, at the time of invention, to have modified the invention of Godenzi and Burke so as to implement a concept of finding similar products to fill the order. Selling a similar item is always better than no sale at all. Providing a substitute item for an item not in stock is widely used in any business and since so doing could be performed readily and easily by any person of ordinary skill in the art, with neither undue experimentation, nor risk of unexpected results.



Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Godenzi in view of Burke and Knapp and further in view of Knickel (US 3,568,161 A), hereinafter referred to as Knickel.

This refers to claim 25.

Godenzi discloses and Burke teaches all limitations of claim 22.

Godenzi discusses an invention that stores the inventory, its location of storage and details of all the items in a supermarket. It receives a batch of order (customer shopping list) and then prepares matches between items to be purchased and its availability with location and number so that all items can be collected efficiently.

Burke teaches an invention that discusses a 3D display of all current items in a warehouse by exact location showing the items, the collection of similar items and a set of different items.

Neither Godenzi nor Burke explicitly discusses the situation of a partial order fulfillment and associated alternatives.

Additionally, referring to claim 25, Knapp teaches an apparatus as claimed in claim 22, wherein each of said storages includes a signal means in the form of a lamp to identify to a user the location of a located item. (See Knapp: Abstract (automatic withdrawal , The merchandise pieces making up a single order, which are then **ejected** simultaneously at **each block** once the **transport container** has arrived at the

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preceding block, are collected and then simultaneously loaded into the transport container when the latter arrives **at the proper block**. After loading, the transport container is allowed to continue))

Therefore, it would have been obvious to one of ordinary skills in the art, at the time of invention, to have modified the invention of Godenzi and Burke so as to implement a concept of location signal to have a handshake when the user arrives at the proper location and since so doing could be performed readily and easily by any person of ordinary skill in the art, with neither undue experimentation, nor risk of unexpected results.

Neither Godenzi nor Burke nor Knapp explicitly teaches the use of a lamp as a location identifier.

However, referring to claim 25, Knickel teaches an apparatus as claimed in claim 22, wherein each of said storages includes a signal means in the form of a lamp to identify to a user the location of a located item. (See Knickel: Col 13: Lines 60-62 (the display lamp according to the location of sensor))

Therefore, it would have been obvious to one of ordinary skills in the art, at the time of invention, to have modified the invention of Godenzi, Burke and Knapp so as to implement a concept of location signal with a lamp to have a handshake when the user

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arrives at the proper location. Use of a lamp at a gate at the airport or a platform at a train station to identify the location is very common and since so doing could be performed readily and easily by any person of ordinary skill in the art, with neither undue experimentation, nor risk of unexpected results.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HARSHAD PARIKH whose telephone number is (571)270-5468. The examiner can normally be reached on Monday through Thursday 9 AM-5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S Gart can be reached on 571-272-3955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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